

Attorney's Docket No.: 06618-914001/CRT-3721

REMARKS

Reconsideration and allowance of the above referenced application are respectfully requested.

Claims 2, 3, 9, 11, and 21-22 stand rejected under 35 USC §103 as allegedly being obvious over Hall et al. in view of Lamont, Jr. In order to obviate the rejection, Claim 21 has been even further amended to emphasize its patentable distinctions. As amended, Claim 21 requires that the cathode material forms a vacuum tight seal that also houses a connection for a vessel, and that the housing and cathode structure is formed of the cathode material. This is very different from Hall et al., and completely unobvious thereover. Hall et al. teaches separate cathode members and a completely separate vacuum envelope outside the cathode members. Column 10 lines 1-12 explain that the cathode member portions 67, 68, 69 and 71 are mechanically locked in position within the cylindrical envelope. However, Hall et al. requires two separate structures: the vacuum envelope, and the cathode inside that vacuum envelope. The cathode structures are described as being mechanically locked into place, but there is no teaching or suggestion that those cathode structures are vacuum sealed with respect to one another.

Consider, therefore, the complications of Hall et al. Hall et al. requires making two separate structures: the cathode

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assembly and the vacuum assembly. Moreover, Hall et al. has effectively the ship-in-a-bottle problem: how does one get the cathode structures inside the vacuum assembly?

The presently claimed structure is entirely different, since it defines that the cathode structure forms the vacuum tight seal. There is no need for a separate vacuum envelope outside the cathode structure as would be necessary in Hall et al. There is no teaching or suggestion of how to avoid the ship-in-a-bottle problem as would be undoubtedly encountered in Hall et al. And while figure 15 of Hall et al. postulates certain rods 73 extending into the anode, note that they only extend from one side. The reason might likely be because the ship-in-a-bottle problem is difficult enough when the cathodes extend from one side, and may be insurmountable when cathode posts are attempted to extend into the anode from both sides. When cathode posts need to extend into the anode from both sides, as claimed, the ship-in-a-bottle problem becomes that much more complicated.

There is no teaching or suggestion from Hall et al. of how Hall et al.'s teachings could be extended to subject matter such as shown in figures 2 and 3 of Lamont Jr. Presumably this would make the puzzle that much more difficult to solve, and this makes it unlikely that a person having ordinary skill in the art could make the hypothetical combination suggested by the

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official action. One might find it hopelessly complex to solve the ship-in-a-bottle problem in this way.

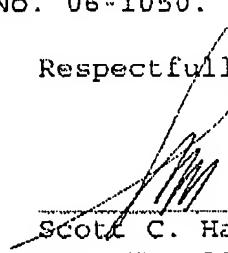
In any case, the present system is different than that suggested by Hall et al. in view of Lamont Jr., since the cathode forms a vacuum enclosure, and there is no need for a separate outer envelope. Moreover, there is a much simpler structure.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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Applicant asks that all claims be allowed. No fee is believed to be due, however, please apply all applicable charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,



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Date: March 24, 2006

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